

## SEQUENCE LISTING

<110> Nemerow, Glen R.  
Li, Erguang

<120> BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGETED GENE DELIVERY

<130> 22908-1228

<140> Herewith

<141> 2001-07-10

<150> converted to a provisional from 09/613,017)

<151> 2000-07-10

<160> 33

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1516

<212> DNA

<213> Mouse

<220>

<221> CDS

<222> (28)...(1395)

<223> DAV-1 heavy chain, penton base monoclonal antibody

<400> 1

cagacactga acacactgac tctaaccc atg gga tgg agc tgg atc ttt ctc ttc	54
Met Gly Trp Ser Trp Ile Phe Leu Phe	
1 5	
ctc ctg tca gga act gca ggc gtc cac tct gag gtc cag ctt cag cag	102
Leu Leu Ser Gly Thr Ala Gly Val His Ser Glu Val Gln Leu Gln Gln	
10 15 20 25	
tca gga cct gag ctg gtg aaa cct ggg gcc tca gtg aag ata tcc tgc	150
Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser Cys	
30 35 40	
aag gct tct gga tac aca ttc act gac tac aac atg cac tgg gtg aag	198
Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Asn Met His Trp Val Lys	
45 50 55	
cag agc cat gga aag agc ctt gag tgg att gga tat att tat cct tac	246
Gln Ser His Gly Lys Ser Leu Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr	
60 65 70	
aaa ggt ggt act ggc tac aac cag aag ttc aag agc aag gcc aca ttg	294
Lys Gly Gly Thr Gly Tyr Asn Gln Lys Phe Lys Ser Lys Ala Thr Leu	
75 80 85	
aca aca gac agt tcc tcc aac aca gcc tac atg gag ctc cgc agc ctg	342
Thr Thr Asp Ser Ser Ser Asn Thr Ala Tyr Met Glu Leu Arg Ser Leu	
90 95 100 105	
aca tct gat gcc tct gca gtc tat tac tgt gca aga ggg att gct tac	390
Thr Ser Asp Ala Ser Ala Val Tyr Tyr Cys Ala Arg Gly Ile Ala Tyr	
110 115 120	

tgg ggc caa ggg act ctg gtc act gtc tct gca gcc aaa acg aca ccc 438  
 Trp Gly Gln Gly Thr Leu Val Thr 130 Val Ser Ala Ala Lys Thr Thr Pro  
 125

cca tct gtc tat cca ctg gcc cct gga tct gct gcc caa act aac tcc 486  
 Pro Ser Val Tyr Pro Leu Ala Pro Gly Ser Ala Ala Gln Thr Asn Ser  
 140 145 150

atg gtg acc ctg gga tgc ctg gtc aag gcc tat ttc cct gag cca gtg 534  
 Met Val Thr Leu Gly Cys Leu Val Lys Gly Tyr Phe Pro Glu Pro Val  
 155 160 165

aca gtg acc tgg aac tct gga tcc ctg tcc agc ggt gtg cac acc ttc 582  
 Thr Val Thr Trp Asn Ser Gly Ser Leu Ser Ser Gly Val His Thr Phe  
 170 175 180 185

cca gct gtc ctg cag tct gac ctc tac act ctg agc agc tca gtg act 630  
 Pro Ala Val Leu Gln Ser Asp Leu Tyr 195 Thr Leu Ser Ser Ser Val Thr  
 190 200

gtc ccc tcc agc acc tgg ccc agc gag acc gtc acc tgc aac gtt gcc 678  
 Val Pro Ser Ser Thr Trp Pro Ser Glu Thr Val Thr Cys Asn Val Ala  
 205 210 215

cac ccg gcc agc agc acc aag gtg gac aag aaa att gtg ccc agg gat 726  
 His Pro Ala Ser Ser Thr Lys Val Asp Lys Lys Ile Val Pro Arg Asp  
 220 225 230

tgt ggt tgt aag cct tgc ata tgt aca gtc cca gaa gta tca tct gtc 765  
 Cys Gly Cys Lys Pro Cys Ile Cys Thr Val Pro Glu Val Ser Ser Val  
 235 240 245

ttc atc ttc ccc cca aag ccc aag gat gtg ctc acc att act ctg act 822  
 Phe Ile Phe Pro Pro Lys Pro Lys Asp Val Leu Thr 250 255 260 265

cct aag gtc acg tgt gtt gtg gta gac atc agc aag gat gat ccc gag 870  
 Pro Lys Val Thr Cys Val Val Val Asp Ile Ser Lys Asp Asp Pro Glu  
 270 275 280

gtc cag ttc agc tgg ttt gta gat gat gtg gag gtg cac aca gct cag 918  
 Val Gln Phe Ser Trp Phe Val Asp Asp Val Glu Val His Thr Ala Gln  
 285 290 295

acg caa ccc cgg gag gag cag ttc aac agc act ttc cgc tca gtc agt 966  
 Thr Gln Pro Arg Glu Glu Gln Phe Asn Ser Thr Phe Arg Ser Val Ser  
 300 305 310

gaa ctt ccc atc atg cac cag gac tgg ctc aat ggc aag gag ttc aaa 1014  
 Glu Leu Pro Ile Met His Gln Asp Trp Leu Asn Gly Lys Glu Phe Lys  
 315 320 325

tgc agg gtc aac agt gca gct ttc cct gcc ccc atc gag aaa acc atc 1062  
 Cys Arg Val Asn Ser Ala Ala Phe Pro Ala Pro Ile Glu Lys Thr Ile  
 330 335 340 345

tcc aaa acc aaa ggc aga ccg aag gct cca cag gtg tac acc att cca 1110  
 Ser Lys Thr Lys Gly Arg Pro Lys Ala 350 355 360 365

cct ccc aag gag cag atg gcc aag gat aaa gtc agt ctg acc tgc atg 1158

Pro Pro Lys Glu Gln Met Ala Lys Asp Lys Val Ser Leu Thr Cys Met  
 365 370 375

ata aca gac ttc ttc cct gaa gac att act gtg gag tgg cag tgg aat 1206  
 Ile Thr Asp Phe Phe Pro Glu Asp Ile Thr Val Glu Trp Gln Trp Asn  
 380 385 390

ggg cag cca gcg gag aac tac aag aac act cag ccc atc atg gac aca 1254  
 Gly Gln Pro Ala Glu Asn Tyr Lys Asn Thr Gln Pro Ile Met Asp Thr  
 395 400 405

gat ggc tct tac ttc gtc tac agc aag ctc aat gtg cag aag agc aac 1302  
 Asp Gly Ser Tyr Phe Val Tyr Ser Lys Leu Asn Val Gln Lys Ser Asn  
 410 415 420 425

tgg gag gca gga aat act ttc atc tgc tct gtg tta cat gag ggc ctg 1350  
 Trp Glu Ala Gly Asn Thr Phe Ile Cys Ser Val Leu His Glu Gly Leu  
 430 435 440

cac aac cac cat act gag aag agc ctc tcc cac tct cct ggt aaa 1395  
 His Asn His His Thr Glu Lys Ser Leu Ser His Ser Pro Gly Lys  
 445 450 455

tgatccagtg gtccttgag cctctgggc ctacaggact ctgtcaccta cctccacccc 1455  
 tccctgtata aataaagcac ctgactctgc cttgggaccc tgcaataaaaa aaaaaaaaaa 1515  
 a 1516

<210> 2  
 <211> 456  
 <212> PRT  
 <213> Mouse

<220>  
 <221> PEPTIDE  
 <222> (0)...(0)  
 <223> DAV-1 heavy chain, penton base monoclonal antibody

<400> 2  
 Met Gly Trp Ser Trp Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly  
 1 5 10 15  
 Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys  
 20 25 30  
 Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 Thr Asp Tyr Asn Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu  
 50 55 60  
 Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr Lys Gly Gly Thr Tyr Asn  
 65 70 75 80  
 Gln Lys Phe Lys Ser Lys Ala Thr Leu Thr Thr Asp Ser Ser Ser Asn  
 85 90 95  
 Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Asp Ala Ser Ala Val  
 100 105 110  
 Tyr Trp Cys Ala Arg Gly Ile Ala Tyr Trp Gly Gln Gly Thr Leu Val  
 115 120 125  
 Thr Val Ser Ala Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala  
 130 135 140  
 Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu  
 145 150 155 160  
 Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly  
 165 170 175  
 Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp  
 180 185 190

Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro  
 195 200 205  
 Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys  
 210 215 220  
 Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys Ile  
 225 230 235 240  
 Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro  
 245 250 255  
 Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val Val  
 260 265 270  
 Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe Val  
 275 280 285  
 Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln  
 290 295 300  
 Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His Gln  
 305 310 315 320  
 Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 355 360 365  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400  
 Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr  
 405 410 415  
 Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe  
 420 425 430  
 Ile Cys Ser Val Leu His Glu Gly Leu His Asn His His Thr Glu Lys  
 435 440 445  
 Ser Leu Ser His Ser Pro Gly Lys  
 450 455

&lt;210&gt; 3

&lt;211&gt; 831

&lt;212&gt; DNA

&lt;213&gt; Mouse

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (13)...(726)

&lt;223&gt; DAV-1 light chain, penton base monoclonal antibody

&lt;400&gt; 3

aagcttaccg cc atg gag aca gac aca atc ctg cta tgg gtg ctg ctg ctc 51  
 Met Glu Thr Asp Thr Ile Leu Leu Trp Val Leu Leu Leu  
 1 5 10

tgg gtt cca ggc tcc act ggt gac att gtg ctg acc caa tct cca gct 99  
 Trp Val Pro Gly Ser Thr Gly Asp Ile Val Leu Thr Gln Ser Pro Ala  
 15 20 25

tct ttg gct gtg tct cta ggg cag agg gcc acc atc tcc tgc aag gcc 147  
 Ser Leu Ala Val Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Lys Ala  
 30 35 40 45

agc caa agt gtt gat tat gat ggt gat agt tat atg aac tgg tac caa 195  
 Ser Gln Ser Val Asp Tyr Asp Gly Asp Ser Tyr Met Asn Trp Tyr Gln  
 50 55 60

cag aaa cca gga cag cca ccc aaa ctc ctc atc tat gct gca tcc aat 243  
 Gln Lys Pro Gly Gln Pro Pro Lys Leu Ile Tyr Ala Ala Ser Asn  
 65 70 75  
 tta gaa tct ggg atc cca gcc agg ttt agt ggc agt ggg tct ggg aca 291  
 Leu Glu Ser Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Thr  
 80 85 90  
 gac ttc acc ctc aac atc cat cct gtg gag gag gag gat gct gca acc 339  
 Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr  
 95 100 105  
 tat tac tgt cag caa act aat gag gat ccg tgg acg ttc ggt gga ggc 387  
 Tyr Tyr Cys Gln Gln Thr Asn Glu Asp Pro Trp Thr Phe Gly Gly Thr  
 110 115 120 125  
 acc aag ctg gaa atc aaa cgg gct gat gct gca cca act gta tcc atc 435  
 Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ile  
 130 135 140  
 ttc cca cca tcc agt gag cag tta aca tct gga ggt gcc tca gtc gtg 483  
 Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser Val Val  
 145 150 155  
 tgc ttc ttg aac aac ttc tac ccc aaa gac atc aat gtc aag tgg aag 531  
 Cys Phe Leu Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys  
 160 165 170  
 att gat ggc agt gaa cga caa aat ggc gtc ctg aac agt tgg act gat 579  
 Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp Thr Asp  
 175 180 185  
 cag gac agc aaa gac agc acc tac agc atg agc agc acc ctc acg ttg 627  
 Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu  
 190 195 200 205  
 acc aag gac gag tat gaa cga cat aac agc tat acc tgt gag gcc act 675  
 Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu Ala Thr  
 210 215 220  
 cac aag aca tca act tca ccc att gtc aag agc ttc aac agg aat gag 723  
 His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg Asn Glu  
 225 230 235  
 tgt tagagacaaa ggtcctgaga cgccaccacc agctccccag ctccatccta 776  
 Cys  
 tcttcctctc taaggctcttg gaggtctcct cgagcggtaa agggcgaatt ccagc 831  
 <210> 4  
 <211> 238  
 <212> PRT  
 <213> Mouse  
 <220>  
 <221> PEPTIDE  
 <222> (0)...(0)  
 <223> DAV-1 light chain, penton base monoclonal antibody  
 <400> 4  
 Met Glu Thr Asp Thr Ile Leu Leu Trp Val Leu Leu Leu Trp Val Pro

1 5 10 15  
 Gly Ser Thr Gly Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala  
 20 25 30  
 Val Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Lys Ala Ser Gln Ser  
 35 40 45  
 Val Asp Tyr Asp Gly Asp Ser Tyr Met Asn Trp Tyr Gln Gln Lys Pro  
 50 55 60  
 Gly Gln Pro Pro Lys Leu Leu Ile Tyr Ala Ala Ser Asn Leu Glu Ser  
 65 70 75 80  
 Gly Ile Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr  
 85 90 95  
 Leu Asn Ile His Pro Val Glu Glu Asp Ala Thr Tyr Tyr Cys  
 100 105 110  
 Gln Gln Thr Asn Glu Asp Pro Trp Thr Phe Gly Gly Thr Lys Leu  
 115 120 125  
 Glu Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ile Phe Pro Pro  
 130 135 140  
 Ser Ser Glu Gln Leu Thr Ser Gly Gly Ala Ser Val Val Cys Phe Leu  
 145 150 155  
 Asn Asn Phe Tyr Pro Lys Asp Ile Asn Val Lys Trp Lys Ile Asp Gly  
 160 165 170  
 Ser Glu Arg Gln Asn Gly Val Leu Asn Ser Trp Thr Asp Gln Asp Ser  
 175 180 185  
 Lys Asp Ser Thr Tyr Ser Met Ser Ser Thr Leu Thr Leu Thr Lys Asp  
 190 195 200  
 Glu Tyr Glu Arg His Asn Ser Tyr Thr Cys Glu Ala Thr His Lys Thr  
 205 210 215  
 Ser Thr Ser Pro Ile Val Lys Ser Phe Asn Arg Asn Glu Cys  
 220 225 230 235

<210> 5  
 <211> 1314  
 <212> DNA  
 <213> Mouse

<220>  
 <221> CDS  
 <222> (0)...(1314)  
 <223> Portion of DAV-1 heavy chain used for fusion protein  
 bifunctional antibody

<400> 5  
 atg gga tgg agc tgg atc ttt ctc ttc ctc ctg tca gga act gca ggc 48  
 Met Gly Trp Ser Trp Ile Phe Leu Phe Leu Ser Gly Thr Ala Gly  
 1 5 10  
 gtc cac tct gag gtc cag ctt cag cag tca gga cct gag ctg gtg aaa 96  
 Val His Ser Glu Val Gln Leu Gln Ser Gly Pro Glu Leu Val Lys  
 20 25 30  
 cct ggg gcc tca gtg aag ata tcc tgc aag gct tct gga tac aca ttc 144  
 Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 act gac tac aac atg cac tgg gtg aag cag agc cat gga aag agc ctt 192  
 Thr Asp Tyr Asn Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu  
 50 55 60  
 gag tgg att gga tat att tat cct tac aaa ggt ggt act ggc tac aac 240  
 Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr Lys Gly Gly Thr Gly Tyr Asn  
 65 70 75 80



Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 ttc cct gcc ccc atc gag aaa acc atc tcc aaa acc aaa ggc aga ccg 1056  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350  
 aag gct cca cag gtg tac acc att cca cct ccc aag gag cag atg gcc 1104  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 355 360 365  
 aag gat aaa gtc agt ctg acc tgc atg ata aca gac ttc cct gaa 1152  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 gac att act gtg gag tgg cag tgg aat ggg cag cca gcg gag aac tac 1200  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400  
 aag aac act cag ccc atc atg gac aca gat ggc tct tac ttc gtc tac 1248  
 Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr  
 405 410 415  
 agc aag ctc aat gtg cag aag agc aac tgg gag gca gga aat act ttc 1296  
 Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe  
 420 425 430  
 atc tgc tct gtg tta cat 1314  
 Ile Cys Ser Val Leu His  
 435

&lt;210&gt; 6

&lt;211&gt; 438

&lt;212&gt; PRT

&lt;213&gt; Mouse

&lt;220&gt;

&lt;221&gt; PEPTIDE

&lt;222&gt; (0)...(0)

<223> Portion of DAV-1 heavy chain used for fusion protein  
bifunctional antibody

&lt;400&gt; 6

Met Gly Trp Ser Trp Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly  
 1 5 10 15  
 Val His Ser Glu Val Gln Leu Gln Ser Gly Pro Glu Val Lys  
 20 25 30  
 Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 Thr Asp Tyr Asn Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu  
 50 55 60  
 Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr Lys Gly Gly Thr Gly Tyr Asn  
 65 70 75 80  
 Gln Lys Phe Lys Ser Lys Ala Thr Leu Thr Thr Asp Ser Ser Ser Asn  
 85 90 95  
 Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Asp Ala Ser Ala Val  
 100 105 110  
 Tyr Tyr Cys Ala Arg Gly Ile Ala Tyr Trp Gly Gln Gly Thr Leu Val  
 115 120 125  
 Thr Val Ser Ala Ala Lys Thr Pro Pro Ser Val Tyr Pro Leu Ala  
 130 135 140

Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu  
 145 150 155 160  
 Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly  
 165 170 175  
 Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp  
 180 185 190  
 Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro  
 195 200 205  
 Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys  
 210 215 220  
 Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys Ile  
 225 230 235 240  
 Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro  
 245 250 255  
 Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val Val  
 260 265 270  
 Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe Val  
 275 280 285  
 Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln  
 290 295 300  
 Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His Gln  
 305 310 315 320  
 Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 355 360 365  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400  
 Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr  
 405 410 415  
 Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe  
 420 425 430  
 Ile Cys Ser Val Leu His  
 435

<210> 7  
 <211> 157  
 <212> PRT  
 <213> Human  
  
 <220>  
 <221> PEPTIDE  
 <222> (0)...(0)  
 <223> Tumor necrosis factor-alpha (TNF alpha, mature  
 peptide)

<400> 7  
 Val Arg Ser Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His Val  
 1 5 10 15  
 Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg  
 20 25 30  
 Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu  
 35 40 45  
 Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe  
 50 55 60  
 Lys Gly Gln Gly Cys Pro Ser Thr His Val Leu Leu Thr His Thr Ile  
 65 70 75 80

Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala  
 85 90 95  
 Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys  
 100 105 110  
 Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys  
 115 120 125  
 Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp Phe  
 130 135 140  
 Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu  
 145 150 155

<210> 8  
 <211> 70  
 <212> PRT  
 <213> Human

<220>  
 <221> PEPTIDE  
 <222> (0)...(0)  
 <223> Human Insulin-like Growth Factor 1 sequence  
 (IGF-1, mature peptide)

<400> 8  
 Gly Pro Glu Thr Leu Cys Gly Ala Glu Leu Val Asp Ala Leu Gln Phe  
 1 5 10 15  
 Val Cys Gly Asp Arg Gly Phe Tyr Phe Asn Lys Pro Thr Gly Tyr Gly  
 20 25 30  
 Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys  
 35 40 45  
 Phe Arg Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu  
 50 55 60  
 Lys Pro Ala Lys Ser Ala  
 65 70

<210> 9  
 <211> 53  
 <212> PRT  
 <213> Human

<220>  
 <221> PEPTIDE  
 <222> (0)...(0)  
 <223> Epidermal Growth Factor (EGF, mature peptide)

<400> 9  
 Asn Ser Asp Ser Glu Cys Pro Leu Ser His Asp Gly Tyr Cys Leu His  
 1 5 10 15  
 Asp Gly Val Cys Met Tyr Ile Glu Ala Leu Asp Lys Tyr Ala Cys Asn  
 20 25 30  
 Cys Val Val Gly Tyr Ile Gly Glu Arg Cys Gln Tyr Arg Asp Leu Lys  
 35 40 45  
 Trp Trp Glu Leu Arg  
 50

<210> 10  
 <211> 164  
 <212> PRT  
 <213> Human

<220>  
 <221> PEPTIDE  
 <222> (0)...(0)

&lt;223&gt; Stem Cell Factor (SCF, mature peptide)

&lt;400&gt; 10

```

Glu Gly Ile Cys Arg Asn Arg Val Thr Asn Asn Val Lys Asp Val Thr
1      15
Lys Leu Val Ala Asn Leu Pro Lys Asp Tyr Met Ile Thr Leu Lys Tyr
20     25
Val Pro Gly Met Asp Val Leu Pro Ser His Cys Trp Ile Ser Glu Met
35     40
Val Val Gln Leu Ser Asp Ser Leu Thr Asp Leu Leu Asp Lys Phe Ser
50     55
Asn Ile Ser Glu Gly Leu Ser Asn Tyr Ser Ile Ile Asp Lys Leu Val
65     70
Asn Ile Val Asp Asp Leu Val Glu Cys Val Lys Glu Asn Ser Ser Lys
85     90
Asp Leu Lys Lys Ser Phe Lys Ser Pro Glu Pro Arg Leu Phe Thr Pro
100    105
Glu Glu Phe Phe Arg Ile Phe Asn Arg Ser Ile Asp Ala Phe Lys Asp
115    120
Phe Val Val Ala Ser Glu Thr Ser Asp Cys Val Val Ser Ser Thr Leu
130    135
Ser Pro Glu Lys Asp Ser Arg Val Ser Val Thr Lys Pro Phe Met Leu
145    150
Pro Pro Val Ala
155    160

```

&lt;210&gt; 11

&lt;211&gt; 597

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Fusion protein with N-terminal portion of DAV-1 heavy chain and TNF alpha mature peptide

&lt;400&gt; 11

```

Met Gly Trp Ser Trp Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly
1      5      10
Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20     25
Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35     40
Thr Asp Tyr Asn Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu
50     55
Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr Lys Gly Gly Thr Gly Tyr Asn
65     70
Gln Lys Phe Lys Ser Lys Ala Thr Leu Thr Thr Asp Ser Ser Ser Asn
85     90
Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Asp Ala Ser Ala Val
100    105
Tyr Tyr Cys Ala Arg Gly Ile Ala Tyr Trp Gly Gln Gly Thr Leu Val
115    120
Thr Val Ser Ala Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala
130    135
Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu
145    150
Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly
165    170
Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp
180    185
Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro
195    200
205

```

Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys  
 210 215 220  
 Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys Ile  
 225 230 235 240  
 Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro  
 245 250 255  
 Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val Val  
 260 265 270  
 Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe Val  
 275 280 285  
 Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln  
 290 295 300  
 Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His Gln  
 305 310 315 320  
 Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 355 360 365  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400  
 Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr  
 405 410 415  
 Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe  
 420 425 430  
 Ile Cys Ser Val Leu His Glu Phe Val Arg Ser Ser Ser Arg Thr Pro  
 435 440 445  
 Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro Gln Ala Glu Gly  
 450 455 460  
 Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu Leu Ala Asn Gly  
 465 470 475 480  
 Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser Glu Gly Leu Tyr  
 485 490 495  
 Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly Cys Pro Ser Thr  
 500 505 510  
 His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala Val Ser Tyr Gln  
 515 520 525  
 Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro Cys Gln Arg Glu  
 530 535 540  
 Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu Pro Ile Tyr Leu  
 545 550 555 560  
 Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu Ser Ala Glu Ile  
 565 570 575  
 Asn Arg Pro Asp Tyr Leu Asp Phe Ala Glu Ser Gly Gln Val Tyr Phe  
 580 585 590  
 Gly Ile Ile Ala Leu  
 595

&lt;210&gt; 12

&lt;211&gt; 510

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

 <223> Fusion protein with N-terminal portion of DAV-1 heavy chain  
 and IGF-1 mature peptide

&lt;400&gt; 12

Met Gly Trp Ser Trp Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly

1 5 10 15  
 Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys  
 20 25 30  
 Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 Thr Asp Tyr Asn Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu  
 50 55 60  
 Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr Lys Gly Gly Thr Gly Tyr Asn  
 65 70 75 80  
 Gln Lys Phe Lys Ser Lys Ala Thr Leu Thr Thr Asp Ser Ser Ser Asn  
 85 90 95  
 Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Asp Ala Ser Ala Val  
 100 105 110  
 Tyr Tyr Cys Ala Arg Gly Ile Ala Tyr Trp Gly Gln Gly Thr Leu Val  
 115 120 125  
 Thr Val Ser Ala Ala Lys Thr Thr Pro Ser Val Tyr Pro Leu Ala  
 130 135 140  
 Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu  
 145 150 155 160  
 Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly  
 165 170 175  
 Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp  
 180 185 190  
 Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro  
 195 200 205  
 Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys  
 210 215 220  
 Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys Ile  
 225 230 235 240  
 Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro  
 245 250 255  
 Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val Val  
 260 265 270  
 Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe Val  
 275 280 285  
 Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln  
 290 295 300  
 Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His Gln  
 305 310 315 320  
 Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 355 360 365  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400  
 Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr  
 405 410 415  
 Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe  
 420 425 430  
 Ile Cys Ser Val Leu His Glu Phe Gly Pro Glu Thr Leu Cys Gly Ala  
 435 440 445  
 Glu Leu Val Asp Ala Leu Gln Phe Val Cys Gly Asp Arg Gly Phe Tyr  
 450 455 460  
 Phe Asn Lys Pro Thr Gly Tyr Gly Ser Ser Ser Arg Arg Ala Pro Gln  
 465 470 475 480  
 Thr Gly Ile Val Asp Glu Cys Cys Phe Arg Ser Cys Asp Leu Arg Arg  
 485 490 495  
 Leu Glu Met Tyr Cys Ala Pro Leu Lys Pro Ala Lys Ser Ala

500

505

<210> 13  
 <211> 493  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Fusion protein with N-terminal portion of DAV-1 heavy chain  
 and EGF mature peptide

<400> 13  
 Met Gly Trp Ser Trp Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly  
 1 5 10 15  
 Val His Ser Glu Val Gln Leu Gln Ser Gly Pro Glu Leu Val Lys  
 20 25 30  
 Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe  
 35 40 45  
 Thr Asp Tyr Asn Met His Trp Val Lys Gln Ser His Gly Lys Ser Leu  
 50 55 60  
 Glu Trp Ile Gly Tyr Ile Tyr Pro Tyr Lys Gly Gly Thr Gly Tyr Asn  
 65 70 75 80  
 Gln Lys Phe Lys Ser Lys Ala Thr Leu Thr Thr Asp Ser Ser Ser Asn  
 85 90 95  
 Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Asp Ala Ser Ala Val  
 100 105 110  
 Tyr Tyr Cys Ala Arg Gly Ile Ala Tyr Trp Gly Gln Gly Thr Leu Val  
 115 120 125  
 Thr Val Ser Ala Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro Leu Ala  
 130 135 140  
 Pro Gly Ser Ala Ala Gln Thr Asn Ser Met Val Thr Leu Gly Cys Leu  
 145 150 155 160  
 Val Lys Gly Tyr Phe Pro Glu Pro Val Thr Val Thr Trp Asn Ser Gly  
 165 170 175  
 Ser Leu Ser Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Asp  
 180 185 190  
 Leu Tyr Thr Leu Ser Ser Ser Val Thr Val Pro Ser Ser Thr Trp Pro  
 195 200 205  
 Ser Glu Thr Val Thr Cys Asn Val Ala His Pro Ala Ser Ser Thr Lys  
 210 215 220  
 Val Asp Lys Lys Ile Val Pro Arg Asp Cys Gly Cys Lys Pro Cys Ile  
 225 230 235 240  
 Cys Thr Val Pro Glu Val Ser Ser Val Phe Ile Phe Pro Pro Lys Pro  
 245 250 255  
 Lys Asp Val Leu Thr Ile Thr Leu Thr Pro Lys Val Thr Cys Val Val  
 260 265 270  
 Val Asp Ile Ser Lys Asp Asp Pro Glu Val Gln Phe Ser Trp Phe Val  
 275 280 285  
 Asp Asp Val Glu Val His Thr Ala Gln Thr Gln Pro Arg Glu Glu Gln  
 290 295 300  
 Phe Asn Ser Thr Phe Arg Ser Val Ser Glu Leu Pro Ile Met His Gln  
 305 310 315 320  
 Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350 355  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 360 365  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400



305 310 315 320  
 Asp Trp Leu Asn Gly Lys Glu Phe Lys Cys Arg Val Asn Ser Ala Ala  
 325 330 335  
 Phe Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Arg Pro  
 340 345 350  
 Lys Ala Pro Gln Val Tyr Thr Ile Pro Pro Pro Lys Glu Gln Met Ala  
 355 360 365  
 Lys Asp Lys Val Ser Leu Thr Cys Met Ile Thr Asp Phe Phe Pro Glu  
 370 375 380  
 Asp Ile Thr Val Glu Trp Gln Trp Asn Gly Gln Pro Ala Glu Asn Tyr  
 385 390 395 400  
 Lys Asn Thr Gln Pro Ile Met Asp Thr Asp Gly Ser Tyr Phe Val Tyr  
 405 410 415  
 Ser Lys Leu Asn Val Gln Lys Ser Asn Trp Glu Ala Gly Asn Thr Phe  
 420 425 430  
 Ile Cys Ser Val Leu His Glu Phe Cys Arg Tyr Pro Ala Gln Trp Arg  
 435 440 445  
 Pro Gln Gly Ile Cys Arg Asn Arg Val Thr Asn Asn Val Lys Asp Val  
 450 455 460  
 Thr Lys Leu Val Ala Asn Leu Pro Lys Asp Tyr Met Ile Thr Leu Lys  
 465 470 475 480  
 Tyr Val Pro Gly Met Asp Val Leu Pro Ser His Cys Trp Ile Ser Glu  
 485 490 495  
 Met Val Val Gln Leu Ser Asp Ser Leu Thr Asp Leu Leu Asp Lys Phe  
 500 505 510  
 Ser Asn Ile Ser Glu Gly Leu Ser Asn Tyr Ser Ile Ile Asp Lys Leu  
 515 520 525  
 Val Asn Ile Val Asp Asp Leu Val Glu Cys Val Lys Glu Asn Ser Ser  
 530 535 540  
 Lys Asp Leu Lys Lys Ser Phe Lys Ser Pro Glu Pro Arg Leu Phe Thr  
 545 550 555 560  
 Pro Glu Glu Phe Phe Arg Ile Phe Asn Arg Ser Ile Asp Ala Phe Lys  
 565 570 575  
 Asp Phe Val Val Ala Ser Glu Thr Ser Asp Cys Val Val Ser Ser Thr  
 580 585 590  
 Leu Ser Pro Glu Lys Asp Ser Arg Val Ser Val Thr Lys Pro Phe Met  
 595 600 605  
 Leu Pro Pro Val Ala  
 610

<210> 15  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR primer for amplification of CH3 region of  
 DAV-1 heavy chain.

<400> 15  
 cctgctctgt gtttacatga ggg

23

<210> 16  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR primer for amplification of CH1 region of  
 DAV-1 heavy chain.

<400> 16

cccagggtca tggagttag

19

<210> 17  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR primer for amplification of DAV-1 kappa chain  
CL-A.

<400> 17  
aagatggata cagttggtgc

20

<210> 18  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR primer for amplification of DAV-1 kappa chain  
CL-B.

<400> 18  
tgtcaagagc ttcaacagga

20

<210> 19  
<211> 15  
<212> PRT  
<213> Adenovirus

<220>  
<221> PEPTIDE  
<222> (0)...(0)  
<223> Peptide spanning integrin binding site on penton base.

<400> 19  
Met Asn Asp His Ala Ile Arg Gly Asp Thr Phe Ala Thr Arg Ala  
1 5 10 15

<210> 20  
<211> 9  
<212> PRT  
<213> Adenovirus

<220>  
<221> PEPTIDE  
<222> (0)...(0)  
<223> Epitope on penton base integrin binding site recognized by DAV-1.

<400> 20  
Ile Arg Gly Asp Thr Phe Ala Thr Arg  
1 5

<210> 21  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR sense primer for subcloning DAV-1 heavy chain for whole antibody  
or Fab'2 constructs.

<400> 21  
 ggtaccgcca ccatgggatg gagctggatc t 31  
  
 <210> 22  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> PCR antisense primer for subcloning DAV-1 heavy chain for  
 whole antibody construct.  
  
 <400> 22  
 gaattcatgt aacacagagc agga 24  
  
 <210> 23  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> PCR sense primer for subcloning DAV-1 light chain for  
 whole antibody or Fab'2 constructs.  
  
 <400> 23  
 aagcttgcca ccatggagac agacacaatc ctgct 35  
  
 <210> 24  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> PCR antisense primer for subcloning DAV-1 light chain for  
 whole antibody or Fab'2 constructs.  
  
 <400> 24  
 tctagatgtc tctaacaactc attcctgt 28  
  
 <210> 25  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> PCR antisense primer for subcloning DAV-1 heavy chain for  
 Fab'2 constructs.  
  
 <400> 25  
 gaattctgat acttctggga ctgt 24  
  
 <210> 26  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> PCR sense primer for subcloning TNF $\alpha$  into DAV-1/TNF $\alpha$   
 fusion construct.  
  
 <400> 26  
 gaattcgtca gatcatcttc tcgaac 26

<210> 27  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR antisense primer for subcloning TNF $\alpha$  into DAV-1/TNF $\alpha$  fusion construct.

<400> 27  
 gaattctaca gggcaatgat cccaaa 26

<210> 28  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR sense primer for subcloning IGF-1 into DAV-1/IGF-1 fusion construct.

<400> 28  
 gaattcggac cggagacgct ctgcgg 26

<210> 29  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR antisense primer for subcloning IGF-1 into DAV-1/IGF-1 fusion construct.

<400> 29  
 gaattctaag ctgacttgcc aggcctt 26

<210> 30  
 <211> 96  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR sense primer for subcloning EGF into DAV-1/EGF fusion construct.

<400> 30  
 gaattcaata gtgactctga atgtccctg tccacgatg ggtactgcct ccgatggtggt 60  
 gtgtgcatgt atattgaagc atggacaag tatgca 96

<210> 31  
 <211> 98  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR antisense primer for subcloning EGF into DAV-1/EGF fusion construct.

<400> 31  
 gaattctagc gcagttccca ccaattcagg tctcgggtact gacatcgctc cccgatgtag 60  
 ccaacaacac agttgcatgc atactgtcc aatgcttc 98

<210> 32  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR sense primer for subcloning SCF into DAV-1/SCF  
fusion construct.

<400> 32  
gcggccgcaa gggatctgca ggaatcg

27

<210> 33  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> PCR antisense primer for subcloning SCF into DAV-1/SCF  
fusion construct.

<400> 33  
tctagagtgc aacagggggt aacata

26